

CHICAGO MEDICAL JOURNAL.

VOL. V.]

JUNE, 1862.

[No. 6

SELECTED.

ON THE TEMPERATURE, UREA, CHLORIDE OF SODIUM, AND URINARY WATER IN SCARLET FEVER, AND ON A CYCLE IN DISEASE AND HEALTH.

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The observations were made on patients in the Hospital for Sick Children, under the care of Drs. West, Jenner and Hillier. Thirty cases are given. The temperature, taken several times during the day, is given in charts. The urea and chloride of sodium were estimated daily by Liebig's volumetric method. The observations extended over a variable time, in some cases till the forty-fifth day of the disease.

I. *On the Temperature.*

1. This fell, in the great majority of cases, on either the fifth, tenth, or fifteenth day of the disease.

2. When the temperature remained high till the fifteenth or twentieth day, a fall of variable intensity occurred, usually on each of the preceding fifth days—namely, the fifth, tenth and fifteenth. The temperature after each fall in some cases remained, during the subsequent five days, at the same point reached on the preceding fifth day; in other cases it rose again, reaching during the second or third five days a point as high as it did during the first five.

3. Each fall of the temperature is accompanied by an improvement in the state of the patient, which remains permanent when the temperature does not again rise.

4. Of seventeen cases that came early under notice, the average maximum temperature was a little above 103° .

5. Subsequent to the great fall experienced on the fifth, tenth, or fifteenth day, the temperature often remained rather too high over a variable time, in some cases for fifteen days. The degree of elevation varied, in some cases being between 100° to 101° , but more frequently between 99° and 100° . This elevation of the temperature also usually experienced a fall on each fifth day.

6. This subsequent elevation of the temperature, if of any persistence, was coincident with a continuation of the lesions produced by the scarlet fever, as sore-throat, &c. It sometimes preceded an attack of Bright's disease.

7. At a variable point after the scarlet fever, another elevation of the temperature occurred, due either to Bright's disease, endocarditis, tuberculosis, or chicken-pox; in two cases, the cause could not be ascertained.

8. The date of the second elevation varied; thus, counting from the commencement of the scarlet fever, in albuminuria the mean of six cases gave the twenty-second day; in two cases in which the elevation was probably due to endocarditis, the elevation began on the eighth day; in one case of chicken-pox, it commenced on the sixth day; in one case of tuberculosis, on the ninth.

9. The duration of the elevation due to the above causes varied from two to thirteen days.

10. This subsequent elevation of the temperature due to intercurrent disease always fell either on a fifth day from its own commencement or on a fifth day from the commencement of the scarlet fever.

11. Thus the temperature forms arcs of cycles, lasting in the majority of cases five days; this equality applies to the temperature of the scarlet fever, or of any subsequent intercurrent disease.

12. In severe cases the temperature remained at the same point throughout the day; in slighter cases it fell in the morning and rose during the day: this fall in the morning is one of the earliest signs of improvement.

13. The hour of the day at which the temperature reached its highest point varied greatly. It was most frequently at its highest at some time between two P. M. and eight P. M.

II. *On the Urea.*

1. The urea appears to suffer no increase during the fever.
2. The amount of urea for many days after the decline of the fever is far below the amount normal to the patient.
3. From the above, the author thinks it probable that the kidney is affected from the commencement of the attack, and the elimination of the urea thus checked. In some of the cases the children were puffy about the face, without any blood or albumen occurring in the urine; this perhaps was caused by the retention of urea.
4. On the intercurrent of Bright's disease, the urea in some cases was greatly diminished; in other cases no diminution occurred.

III. *On the Chlorides.*

1. The chlorides were never found absent in any of the cases analyzed.
2. Their amount was always much diminished during the fever days.
3. After the fall of the temperature the chlorides increased gradually.
4. In one case in which Bright's disease supervened the chlorides were estimated: they suffered very little diminution.

IV. *On the Urinary Water.*

Often during the fever there is no diminution in the amount of urinary water; in some cases it is increased.

V. *On the Albumen in the Urine.*

1. The albumen appears at two different periods; (*a*) during the fever days; (*b*) later, during the non-fever days. Out of 21 cases, it only appeared once during the fever days. Of 18 cases which were in the hospital for a considerable time, in 7 albumen appeared during the fever free days.
2. The time of its appearance varied from the ninth to the twenty-third day.
3. The duration of the albumen in the urine varied from three to forty-nine days.
4. There is no necessary connexion between the intensity of the inflammation (tested by the elevation of the temperature) and the duration of the albumen in the urine.
5. There is no necessary connexion between the intensity of the inflammation and the amount of albumen in the urine.

VI. *On Blood in the Urine.*

1. There may be an elevation of the temperature, due probably to inflammation of the kidney, without any blood in the urine.

2. In no cases did blood appear without previous elevation of the temperature.

3. In some cases the blood continued long after the fall of the temperature, and thus probably after the decline of the inflammation.

VII. *Relation between the Blood and Albumen in the Urine.*

1. A very large amount of albumen may occur in the urine without any blood.

2. Blood to a very large amount may occur in the urine with the slightest trace of albumen; and if the blood corpuscles be allowed to settle, the supernatant fluid may give no evidence of albumen.

These cases given were seldom dropsical; they, however, often looked puffy in the face. In some cases the second elevation of the temperature due to Bright's disease was not followed even by puffiness. In one case the patient was puffy, without any other indication of Bright's disease.

VIII. *On a Cycle in Disease.*

In the cases given the temperature did not run an equable course, neither remaining at the same temperature throughout; but formed cycles, composed of a variable number of days, each cycle, however, being composed of the same number of days in the same patient. The cycles in the great majority of cases were composed of five days.

INFLUENCE OF RAILWAY TRAVELLING UPON PUBLIC HEALTH.

Extract from Report of British Commission.

PHYSIOLOGICAL INFLUENCE.—*Habitual travelling.*—In considering the physiological influence of railway travelling upon public health, it is necessary to enlarge the sphere of observation beyond the mere act of travelling, and to regard some of the accessory conditions which surround it. Modern society has seized the occasion offered by increased facilities for busi-

ness communication, and multiplied its means of pleasure and chances of recreation. Habitual railway travellers are found not only amongst those who move from place to place, urged by some necessary impulse; but also there is included amongst them a numerous class of season-ticket holders who, from considerations of health, pleasure, or economy, locate their families at a distance, and daily travel by train to some great industrial centre; again seeking a country home in the evening. This most important class of travellers is especially subject to the extraneous influence alluded to. They are under the necessity of twice daily 'catching the train;' and to a certain extent all their actions prior to departure in the morning and afternoon are influenced by the pervading sense of this anxiety. We will quote here a graphic communication on this matter from Dr. Forbes Winslow.

Dr. F. Winslow on extraneous sources of anxiety and fatigue.—"I have, like many others, during the summer season, removed my family for a period to a watering-place some fifty miles from London, and travelled to and fro night and morning by express train. I have been convinced that the advantage of sleeping by the sea-side, and of an occasional day of rest there, was fully counterbalanced by the fatigue and wear and tear of mind and body incidental to daily journeys over this considerable distance. I went to bed at night conscious that I must rise at a given and somewhat early hour, or miss my train. I am sure that this does not render sleep more sound and refreshing; and every one sleeps best on the Saturday night; when this disturbing element does not exist—since the next is the day of rest. In the same way breakfast is eaten with this necessity of being in time still on one's mind. Then, like every one else, I had to get the cab or carriage and go down to the station; to scramble for the morning paper and get a seat. Then comes the long journey, with all its fatiguing accompaniments. Finally, one has to get to one's residence; this process, or something like it, *mutatis mutandis*, being repeated twice a day. I refer to these separate details because it is in analyzing the general series of phenomena that I am able to explain the fatiguing effects, mental and physical, of constant railway travelling."

Concurrent testimony of other physicians.—The frequent ill-effects of this anxiety and mental pre-occupation are insisted on in the communications made to us by many physicians of great experience. They have a most important bearing in relation to certain diseases which will be elucidated in a sub-

sequent section. Dr. Brown-Sequard observes, that the anxiety is so predominant in many otherwise healthy constitutions, that it produces often a practical incapacity for habitual travelling; and must evidently, when it falls short of this, frequently be injurious. When living near a railway station, he observed that the frequent excitement, and constant hurry and anxiety which he witnessed on the part of passengers arriving, impressed itself on his mind as a mischievous circumstance. In certain unhealthy conditions of the heart it has many times proved fatal.

But the actual fatigue and physical effects of the journey chiefly influence the mass; phlegmatic and robust-minded persons are little likely to allow themselves to be mentally agitated by the necessity for catching trains or the like. But let it here be noted, that a great number of the season-ticket travellers are men past the early vigor of life—time worn by the continued cares of business during long residence in towns, and whom a more or less tardy success in the battle of life has enabled to afford for their families the salutary change of country or sea-side residence, or whom some warning of failing health compels to seek for themselves such a transformed version of the *rus in urbe*. This is a sort of constitution not able to bear unnecessary strain and fatigue.

We will next consider what are the conditions inducing functional change to which travellers are subjected in a railway train, proceeding at ordinary speed.

Effects on the muscular system.—The immediate effect of being placed in a vehicle subjected to rapid, short vibrations and oscillations, as already detailed, is that a considerable number of muscles are called into action, and maintained in a condition of alternating contractile effort throughout the whole journey. The tendency of each movement is to produce more or less motion in the twenty-four pieces of which the spine is made up. These movements are counteracted, and the erect position of the body is maintained, by the adoptive construction of that complex muscular system attached to those osseous pieces. The more violent movements of the carriage call into action the various sets of muscles in the back and chest; and it is only by an incessantly varying play of contraction and relaxation that the body is preserved in a tolerable state of equilibrium, and that the passenger combats with success the tendency to be shaken into a most displeasing variety of shapes and positions. The head is especially thus affected, being so balanced on the spine as to have a tendency to fall forward.

The frequency, rapidity, and peculiar abruptness of the motion of the railway carriage keep thus a constant strain on the muscles; and to this must be ascribed a part of that sense of bodily fatigue, almost amounting to soreness, which is felt after a long journey.

Influence on the cerebral and spinal centres.—The hollow cavities of the spine and cranium, thus partially steadied, by the muscle attached to them contain the great nervous centres, to which concussion of any kind so peculiarly hurtful that they are naturally cushioned on exquisitely-devised waterbeds or are slung by fibrous ligaments, which have the effect of deadening the shocks of ordinary movements. It is unnecessary to dwell upon the injurious effects of commotion of the brain or spinal system of nerves. Cerebral or spinal concussions, in their higher degree, annihilate the functions of those organs. In the milder forms they lead up to disease which, remaining for a long time latent, may still end in paralysis.

The jolting of a railway carriage is a series of small and rapid concussions; and it is worthy to be noted that these increase in proportion to the rate of speed, and that most of the trains by which season-ticket holders travel are express. It may therefore be judged, so far as anatomical grounds are concerned, how prejudicial must be the influence of reiterated concussions.

The seats of carriages.—The well-padded and springy seats of first-class carriages do much to obviate the mischief of these concussions for those who can afford to travel by them; and it has been mentioned to us by a surgeon who, in a great manufacturing centre, is connected officially with several railway companies, that he has observed that men compelled to travel frequently by rail are fully sensible of the practical advantage thus offered by the padded or cushioned seats, and never, if they can avoid it, travel on any other. We believe that commercial travellers, as a rule, occupy first-class carriages, not as a luxury, but as a necessity of their nomadic life. But however this may be, it is right to notice a remarkable fact in the relation of different classes of railway travellers. In 1849 the third-class passengers formed about 51 per cent. of the whole number; in 1860 they formed more than 57 per cent. It therefore becomes a matter of simple justice that the railway companies consider the health of this important class of travellers. In condemning them to sit on hard wooden benches, which transmit fully the shocks incidental to the movement of the carriage, they submit them unnecessarily to one acknowledged source of evil influence on health.

The influence of railway travelling upon the brain cannot, however, be measured solely by estimating the character and extent of the concussions to which it is subjected. The brain is not only affected by the mind, but also through the avenues of the eye and ear; and by the excitement of the respiratory and circulatory systems.

Of mental influences.—The mental condition of passengers by train is commonly, perhaps, sufficiently placid and unconcerned; but several eminently careful observers have, in their communications, alluded to an often experienced condition of uneasiness, scarcely amounting to actual fear, which pervades the generality of travellers by rail. The possibility of collision is constantly present to such persons. And every one knows how; if by chance a train stop at some unusual place, or if the pace be slackened, or the whistle sound its shrill alarm, a head is projected from nearly every window, and anxious eyes are on the look-out for signs and danger. So, too, the frequent lateness of trains, and the bad time which they keep, are causes of anxiety. The pace, also, prevents the traveller from observing natural objects and sites of interest on the road, which made coach travelling a source of mental relaxation and a pastime. The passenger is forced into subjective sources of mental activity; and where the tendency to excitement exists, this also, *quantum valeat*, must be esteemed an undesirable feature belonging to this manner of locomotion.

Effect on the eye.—Objects on the road are passed with such velocity that they only produce momentary impressions on the retina; and thus the visual powers are severely tried. The rapidity with which the brain is necessitated to take cognizance of the retinal images taxes it also more or less heavily. The rapid impression of objects moving over the retina in railway travelling is productive of certain interesting physiological phenomena, to which we can only briefly allude. Sir David Brewster has touched upon some of them with the ability for which he is distinguished. In a paper read at the last meeting of the British Association, and which will doubtless be published in the forthcoming volume of the "Proceedings," this great physicist showed that "when we look at the lines which stones, gravel, or other objects form in consequence of the deviation of their impressions on the retina, and quickly transfer the same lines further back, where the velocity is less, the stones or gravel or other objects would for an instant be distinctly seen, just as we see distinctly rapidly revolving objects in the dark when they are illuminated by an electric

flash, or the light of an exploded copper cap." This phenomenon may be explained by a remarkable and interesting law of compensation. The rapidity and variety of the impressions necessarily fatigue both the eye and the brain. The constantly varying distance at which the objects are placed involves an incessant shifting of the adaptive apparatus by which they are focused upon the retina; and the mental effort by which the brain takes cognizance of them is scarcely less productive of cerebral wear because it is unconscious; for no fact in physiology is more clearly established than that excessive functional activity always implies destruction of material and organic change of substance. Dr. Budd, F. R. S., has directed our attention to the peculiarly dazzling effect of passing in rapid succession the white telegraph posts, from which the wires seem to fall and rise, appearing to the eye to undulate. When the traveller sets himself to read, he imposes yet further labor on the eye in tracing the shifting characters of his book or newspaper, and also on the brain. Especial notice is drawn to this point in an important communication which we have received, and shall hereafter publish in full, from Mr. White Cooper, surgeon-oculist to the Queen. Every one is conscious of the strain upon eyesight incidental to railway travelling and to reading in the train; but it is probable that few habitual travellers are sufficiently cautious in this matter, and that many only become wise by too tardy an interpretation of their personal experience.

Impressions through the ear.—The rattle and noise which accompany the progress of the train create an incessant vibration on the tympanum, and thus influence the brain through the nerve of hearing. Noise is conveyed by vibrations of the air; and hearing is the transmission to the brain, through the medium of the auditory nerve, of those measured vibrations which constitute special sounds. The habitual traveller is little mindful of it, and the brain of many persons is perfectly tolerant of the excitement. But this is an important item in the general cerebral impressions produced. Dr. Fuller of St. George's Hospital, in communicating his personal experience of the influence of habitual railway travelling, mentions a device adopted by him which furnishes at once a test and remedy for this source of cerebral excitement. Surmising that some part of the headache and mental fatigue experienced was due to the rattle and noise, he filled each ear with a light plug of cotton-wool. In this way the vibrations of the air in the meatus were arrested, and the relief is described as having been considerable.

Assailed through the avenues of the eye and ear, and subject to concussions due to vertical movement and lateral oscillation communicated through the trunk, and actually transmitted by the bony walls of the head when it rests against the back of the carriage, the brain is apt to suffer certain physiological changes. Amongst the well-known effects are—occasional dizziness, headache, sickness, and mental fatigue.

Combined effects on the brain.—To these results each of the above causes may contribute something. The noise may be considered most influential in producing headache; but this may be added by the impression of rapidly-passing objects on the eye, or by the effort of reading. For nothing tends more certainly to produce congestion of the base of the brain than the forced fixation of the eyes upon a near object. This is evidenced by experiment, and explained by the connexion of the circulation of the eye with that of the brain, through the ophthalmic artery, springing from the circle of Willis. Some powerful illustrations of this fact are afforded in the phenomena of hypnotism and electro-biology, and of some of the so-called mesmeric phenomena, where sleep and the required changes of the cerebral circulation are physically produced by fixing the eye upon an adjacent shining body. The mere aspect of a swinging object sometimes suffices to produce sickness, as in the late celebrated Dr. Jas. Johnson; and so rapidly-passing objects may aid in the frequent production of nausea in the train. Probably the concussion incidental to the movement of the train is more potential in bringing about this effect. The influences on the respiration and circulation will hereafter be mentioned.

Any sudden alteration of the heart's action may aid in producing giddiness and dizziness, which are not always felt during the journey so strongly as after leaving the carriage. And it is when the circulation is returning to a more regular standard that temporary access of sickness and vertigo is often experienced. These symptoms have been especially noticed in the case of the travelling Post-office officials, as to whom Dr. Waller Lewis, the medical superintendent of the Post-office, has communicated to us a most valuable mass of information, which will appear in the third Report.

Nausea and sickness.—The tendency to nausea sometimes felt by railway travellers, without any apparent complication of cerebral disturbance, is often due to jolting of the intestines and gallbladder, stimulating the latter to discharge its contents into the stomach, and thus excite biliary sickness. Many

cases have been communicated to us of sickness induced by railway travelling, and some persons are unable to undertake a journey without providing against this unpleasant affection. Bilious subjects Dr. Walter Lewis considers, from his experience, to be unfit for the travelling service, and he rejects such candidates for that employment.

The nervous influences.—In the valuable communications on the subject of this inquiry made to us by Dr. Brown-Sequard, the probable cause of sickness is explained by reference to the influence of the movements in a railway carriage on the phrenic, splanchnic, and vagus nerves. It is known by the experiments of several physiologists, that irritation of the vagus nerve produces vomiting; and the jolting of the stomach, separating it from the diaphragm and producing corresponding traction of the œsophagus, (which is attached to the diaphragm, when passing through that muscular septum,) is admitted by physiologists to afford the best explanation of the ordinary phenomena of sea-sickness. A second cause of vomiting, as shown by Luschka, is the irritation of the phrenic nerves due to the shaking of the diaphragm. Dr. Brown-Sequard, in former publications, has already investigated this subject experimentally, and has not only given confirmation to these observations, but has carried them further; and the result of his experiments will serve to give the physiological explanation of the peculiar *faintness* always accompanying nausea arising from the movements of a ship or railway carriage. He has shown that irritation of the sympathetic nerve in the abdomen induces cardiac syncope by a reflex action, influencing the action of the heart through the impressions conveyed by the splanchnic nerves acting upon the vagus through the spinal cord and medulla oblongata. The reflex character of the phenomena can be demonstrated by dividing the vagus in animals, when the irritation of the sympathetic no longer produces this cessation of the heart's beat, or by the division of the spinal cord between the communication of the sympathetic and the origin of the vagus, when a similarly negative effect is produced. Thus the faintness which sometimes occurs to travellers in a railway carriage, and the sickness accompanied by faintness, equally find their true scientific explanation. Every one has observed the marble pallor which accompanies this nausea; it is simple the result of a true fainting of the heart always preceding this form of sickness. It is needless to insist upon the important application of this physiological fact to all those persons who,

being the subjects of fatty degeneration or other disease of the heart, are most likely to suffer from this kind of syncope, and in whom the organ may less readily recover from the temporary paralysis. There are two remedies of great value in diminishing these evil effects. A thoroughly tight bandage around the abdomen; inasmuch as it prevents, to some extent, the shaking of the stomach, and consequent irritation of the vagus nerve, so precluding the occurrence of sickness; and chloroform taken into the stomach may similarly prevent or diminish the annoyance by partially paralysing the vagus.
—*London Lancet.*

THE ACTION OF THE SECOND CLASS OF VOLUNTARY MUSCLES,

That they are attached at both extremities; but their action is that of extension and retraction, simply.

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84. For the plainest instances of this action, we must again have recourse to some of the inferior orders of animals. The land Terrapin furnishes several instances of this character, in the protrusion of its head, in the opening of its valves, &c.

From that part of the interior of the Carapax or top shell that corresponds to the lumbar vertebræ. Each of these muscles has three distinct heads or bundles of longitudinal fibres, the longest of which arises from the most posterior vertebræ, and extending along on the side of the dorsal and cervical vertebræ, is inserted into the Occiput; the other two bundles of fibres arise a little in advance of this, and are inserted into the two cervical vertebræ nearest the head. Any one, who understands this arrangement of the muscles, and who has become acquainted with our view of muscular action, will readily comprehend how the head of the Terrapin is protruded, simply by the innervation and consequent elongation of these muscles; and he will readily comprehend how the head, when protruded, can be retracted within the shell, by the withdrawal of the nerve-fluid from these muscles.

85. In order to protrude the head, the Terrapin must first open its shells for this purpose. This it does by pushing down the anterior valve of the Plastrum or bottom shell, by which

the space between the shells is closed. To enable it to do this, it is provided with two muscles, arising one on each side of the anterior dorsal vertebræ, which, passing down on either side of the neck, are inserted into the front edge of the anterior valve. By elongating these two muscles the valve is pushed down and the shells opened. The limbs of this animal are protruded and retracted by a similar arrangement of muscles, destined to this end.

86. The Snail (*Helix nemoralis*) presents some remarkable instances of the action of muscles that belong to this class. The soft parts of this animal consist mostly in a large bundle or mass of longitudinal muscular fibres, with which the several parts, as the head, the foot, &c., are protruded from the helix or turbinated shell; that is, by the active extension of these fibres.

The eyes of the Snail may be observed, when the animal is in motion, at the extremities of two fleshy tubes, or horns as they are commonly called, projecting from the head. From the mass of longitudinal fibres, two separate bundles or distinct muscles arise, and passing through the visceral cavity and traversing the horns, are inserted, one around the base of each eye, at the extremities of these horns. When the Snail is at rest, the Ophthalmic muscles are retracted, the horns inverted, and the eyes are thus securely packed away in the visceral cavity; but when it is aroused, and protrudes its head and foot, it also determines its nerve-fluid to the Ophthalmic muscles, and by elongating them, pushes forth its eyes. The horns are tubes filled out with muscular fibres placed spirally about the walls; and when the longitudinal muscles are extended these fibres are also extended; and in this way the calibres of the horns are enlarged, and thus allow a free action of the internal muscles with their nerves and blood-vessels.

It will be observed that there is a striking resemblance in the arrangement and action of the muscles in this instance to those in the instance formerly mentioned of the tongue of the Ant-eater. The explanations given by Physiologists of these two phenomena are the same, and both are equally absurd. They say, the eye of the Snail is everted by the contraction of the spiral muscle of the horn! The longitudinal muscle, they suppose, is intended and used solely for the purpose of retracting the eye!

87. We will advert to but one other instance of the action of the muscles of this class; it is to that of the muscles of the body of the Leech. This animal is possessed of two fleshy

discs, one at each extremity of the body, by means of which it attaches itself to the surface on which it crawls; the discs acting as cupping-glasses, and taking a firm hold wherever applied.

The walls of the body of the Leech are mainly composed of muscular fibres, that are arranged in three distinct layers. The fibres of the outer layer are disposed circularly, those of the middle layer spirally; but the fibres of the internal layer are all arranged longitudinally. By means of the later layer of fibres the progression of the leech is effectual. When stationery, the discs are attached to a surface near each other; but when about to move forward, the leech first detaches the anterior disc, and then extending its body by elongating the longitudinal muscles, it again attaches this disc to the surface on which it is crawling, or to some near object. When this anterior disc is fixed, the posterior one is detached and brought up, by the retraction or contraction of the same muscles, to be attached again near the former. In this manner the leech moves from point to point in its progress, sometimes with considerable celerity. In the same manner, the progression of all crawling animals, Annelidans, Serpents, &c., is effected. They first fix some part of the body, and from this point the body is extended by the elongation of the longitudinal muscles, when they again fix the forward portion of the body, and by contracting these same muscles by withdrawing the nerve-fluid from them, they draw up their length from behind.

But why do I say this of *crawling* animals? when the same mode of progressing is common to *all* animals; as will be explained further on.

ACTION OF THE THIRD CLASS OF VOLUNTARY MUSCLES.

88. The sphincters or sphincter muscle that belong to this class are composed of fibres arranged circularly around the openings about which they are placed, as the *Orbiculares palpebrarum*, the *Orbicularis oris*, &c. In a state of rest or of repose these muscles are moderately contracted, and the openings are closed: they may be more forcibly contracted and the openings more firmly closed by an intentional, persistent withdrawal of the nerve-fluid from their fibres. But when it is designated to bring into use the eyes or the mouth, the sphincter muscles are innervated, their fibres become actively elongated, and the openings are dilated or expanded.

The error that has prevailed in relation to the action of these muscles has arisen from the difficulty in distinguishing the

consciousness that attends the innervation of the muscles from that which attends the withdrawal of the nerve-fluid from them. The early physiologists mistook the one consciousness for the other; and this mistake has continued in the books to the present time. They supposed that innervation was attended with the active contraction of the muscles and the closing or shutting of the openings. The really active state of the muscles they called relaxation, and supposed it was the result of inaction, or of an absence of the cause of action.

89. The instances of the action of the voluntary muscles we have already presented, are so plain, and the explanations given of the phenomena attending such action are so simple, intelligible, and rational, that, it appears to me, they must produce in every well ordered, unsophisticated mind that considers them, a full conviction of the truth of the law of muscular action that we have suggested.

The absurdity of former explanations of some of the above phenomena we have pointed out in passing; but there are, besides, explanations of others of these phenomena, given in accordance with the old theory, equally absurd and unphilosophical to which we have not adverted. The explanations to which we allude are founded in sophistry, and are clearly traceable to this source.

Finding it utterly impossible to furnish a rational explanation, with the received theory, of phenomena such as are presented in the protrusion of the tongue of the Serpent, above referred to, the Sophist, to get around this new difficulty, *invented a new term*, by which all the facts of the case are obscured, covered up, and ignored. The organs, the action of which he could not explain, which are said to be composed of *erectile tissue*. He did not stop to demonstrate even to himself this particular tissue, which in reality has no existence, (for these organs, like all the other soft parts of the animal body, are possessed only of the cellular, the muscular, and the nervous tissues.) This was no part of his design, his sole object being accomplished by the invention of the *term* that would serve, as it has served, to deceive the unwary and unreflecting. It is thought by these, to be a sufficient explanation of all such phenomena to say, that the organs concerned, are composed of *erectile tissue*, and become erected when actively elongated.

The idea commonly attached to this state of these organs is, that they are injected with blood, and are in this way extended. The fallacy of this idea is easily shown, however, by calling to mind the facts, that these organs are elongated before receiving

their extra supply of blood; and that, in many of these instances, the celerity of the motion of the organ, as in the case before us, entirely precludes this idea. The blood could not, by any possibility, be transmitted through the vessels, with a velocity to correspond with the motion of the tongue of the serpent, as indicated above.

ACTION OF THE FOURTH CLASS OF VOLUNTARY MUSCLES,

That are attached at both extremities, but make use of the bones as levers.

90. It is more difficult to convey a just conception of the action of this than that of any other class of voluntary muscles; because the means employed to produce the results are, here, much more complicated. The bones of the limbs to which these muscles are attached, and which are made use of as levers, are provided with two distinct sets of muscles, one on each of the two surfaces towards their line of motion; and their motion is not produced by the action of either set of muscles exclusively, but is caused by forces exerted by both sets at the same time. I repeat, the movement of the limbs of animals is not due exclusively to the action of either of the two sets of muscles with which they are supplied, but each movement is effected by the action or active elongation of one set, and by the contraction of the opposing set.

91. Before entering upon the explanation of the action of this class of muscles, it will be well to call to mind three important truths, that are essential to a clear understanding of this action. These are, First, that the action and the contraction of a muscle are both vital phenomena, to be met with only in the living body, and are not represented elsewhere in any part of the economy of nature. These states of the muscle in the living body are *sui generis*, and no proper conception of them can be gained by comparing them to those of a cord or pulley of any kind or of any condition, whether as wet or dry, elastic or inelastic, &c. Second, that the contraction of a muscle is as much the result of the operation of a law of nature depending on the presence of, or the determination to it, of this fluid; and Third, that the operation of a law of nature is always attended with force or power, as well as its action or active elongation.

Force, it must be admitted, is exerted in connection with the contraction of a muscle; but it is all important that we should not associate in our minds the force, with this state of the muscle, and then call this state of contraction the state of action of the muscle. This is the grand mistake committed by Physio-

logists, that has led them to overlook entirely the true state of action of a muscle, together with the force that is also exerted in connection with this state; and this mistake has led to their confusion of thought, and defective and erroneous views on the subject of muscular action.

I must repeat, the active state, or the state of action of a muscle, is a state of active elongation of its fibres; and in connection with this state, force or power is always exhibited.

92. With the knowledge of the above truths, the explanations we proceed to give of the action of this class of muscles will be rendered intelligible. The instances we shall select for this purpose will be such as are plainest and most familiar; that is, those that are to be observed in the action of the muscles of the limbs, upper and lower, of the human subject.

The action of these muscles are so misunderstood by physiologists, and so misrepresented in the books, that the technical terms employed to designate them are calculated to mislead. I shall, therefore, discard these terms as much as possible from our present consideration, and substitute others. In doing this, let it be understood, that those I propose are suggested only for a temporary use—to simplify the subject to the general reader, and to elucidate the principles involved. I hope, however, that some new terms for these muscles may be permanently adopted that will be more expressive of the true facts of the case than those now employed.

93. The muscles on the anterior surface of the Humerus or bone of the upper arm, embracing the Biceps and Brachialis anticus, we shall regard as one muscle, and call it, from its position, the Præ-humeral muscle; and that on the posterior surface of this bone, the triceps, we shall designate as the Post-humeral muscle.

The Præ-humeral muscle, then, arises from the shoulder blade (scapula) near the joint of the shoulder, and from the bone of the upper arm, and passing along its anterior surface is inserted into the upper portion of the bones of the fore arm.

The Post-humeral muscle arises also in part from the scapula, and in part from the humerus, and passing along the posterior surface of this bone is inserted into a process of one of the bones of the fore arm, called the Olecranon process, that projects behind the joint at the elbow.

94. When the whole arm is extended or straightened out from the flexed position, the mode in which this extension is effected by means of the muscles just mentioned, after what

has been said above, is plain and palpable. In this movement, the anterior or Præ-humeral muscle is actively elongated by the determination to it of the nerve-fluid ; and at the same time the posterior or Post-humeral muscle is contracted by having the nerve-fluid withdrawn. The motion, it will be observed, is produced by both muscles, the anterior and the posterior ; but the former only is in action, or is influenced by the cause of action—the nerve fluid—it is in a state of vital erection ; while the latter is thrown into a peculiar condition, that of contraction, by the abstraction of the cause of action. Both of these conditions, that of active elongation and that of contraction, in the opposing muscles, are essential and indispensable in every movement of the limbs, and each of these conditions being the result, as we have seen, (87) of the operation of a law of nature, such movements are executed with a double force, or with two forces, one of which is derived from the operation of each of these laws of nature.

The opposite movement of the arm—the flexing it at the elbow from the straight position—is produced by an opposite condition of the muscles engaged. In this movement, the posterior muscle is innervated and elongated, while the anterior muscle is contracted. This action of the posterior muscle is better shown, however, in the following instance :

95. The action of the muscles by means of which the fingers are moved, will be best shown by regarding them as two muscles, one on each surface of the bones of the fore arm, from which they arise. We will call them for the present, the Præ-brachial and the Post-brachial muscle, each term embracing the long muscles that go to the several phalanges of the fingers on its respective surface.

The anterior or Præ-brachial muscle arises from the bones of the fore arm towards the elbow, on the inner surface, and extending along in front, passes with its long tendons across the palm of the hand, to be inserted into the several bones of the phalanges of the fingers on their inner surface.

The posterior or Post-brachial muscle in like manner arises from the upper portion of the same bones, but from their outer surface, and passing along on this surface, and with their tendons over the back of the hand, are inserted into the bones of the phalanges of the fingers on their outer surface, extending along even to the extremities of these bones.

96. The great difficulty in realizing the true action and agency of the muscles we have just spoken of, arises from the fact mentioned above, when speaking of the sphincters ; namely, that few minds are capable of distinguishing the

consciousness or the mental sensation that attends the determination of the nerve-fluid to a muscle, that causes its action, from the consciousness or sensation that attends the abstraction of this fluid, that causes the contraction of a muscle. To make this distinction, it requires a patient education and training of the mind, more especially in those who have given some attention to physiology, and who have their minds pre-occupied with erroneous views of muscular action. This mental preparation, however, is what few or none have set about; but when this difficult task is accomplished, it will be observed, that,

97. In flexing the hand, as in forcibly shutting it, or in grasping any object firmly, a determination of the nerve-fluid is made to the posterior or Post-brachial muscle; and its fibres becoming actively or forcibly elongated, tend to produce the movement indicated; at the same time, the nerve-fluid is withdrawn from the anterior or Præ-brachial muscle, and its fibres becoming forcibly contracted, the act of shutting the hand, or of grasping, is perfected and completed.

The opposite states of these muscles—that is, the innervation and extension of the anterior, and the enervation and contraction of the posterior muscle—it is evident, would produce the contrary movement of the fingers, the extending or straightening them out.

98. If I have succeeded in explaining to the satisfaction of the reader, the action and agency of the muscles engaged in effecting the movements of the upper extremities, there will be no difficulty whatever in his comprehending the action and agency of the other muscles of this class that are concerned in the various voluntary movements of the living body. In all such movements, we repeat, two sets of muscles are concerned, whose action is opposed, the one to the other; but the position established is the result of the agency, mainly of the set that is in a state of action, although in some measure attributable to the contraction of the opposing set. Thus, in assuming and maintaining the erect position of the body, the muscles, on the anterior surfaces of the lower extremities, of the spinal columns, and of the walls of the abdomen and thorax, are brought into action, and the result is accomplished, principally by the agency of these muscles, but in some measure also, by the contraction of those on the opposite surfaces. Again:

99. In locomotion, of the biped, for example, it is true, the hinder foot is brought up to the advanced position; and, again, the foot is raised to be carried forward by the contraction of one set of muscles; but the progressive motion—the

extending the leg and foot in advance, and the projecting forward of the whole body—is effected by the action, the active elongation, or extension of the other set; or the opposite conditions of the same muscles may be employed for both of these purposes.

The mode of progression, we have said, (87) is the same in all animals. In all, a portion of the body is advanced from a fixed point by the action or extension of certain muscles, and in all, a portion of the body that is behind this point is brought up by the contraction of certain muscles. In this respect the halting gait of the biped—that is to say, when, in walking, he keeps the same foot always in advance, bringing up the hinder foot to it, and then moving the front foot forward again—is the same with the natural gait of the snail; and, again, the snail would imitate the natural gait, or the continued progressive motion of the biped, if, instead of attaching its hinder disc in the rear of the front one, it could carry it along forward, and attach it in an advanced position, and so continue its motion, carrying its discs alternately forward.

100. The arrangement of the muscles, however, in the lower extremities is somewhat different from that of the upper. The extension of the leg on the thigh is effected by the action of the muscles on the posterior surface of the thigh bone or femur, while the leg is flexed on the thigh by the action of the muscles on the anterior surface of this bone; and, again, the action of the *tibialis anticus*, and of the anterior *longus digitorum* on the anterior surface of the leg or tibia, tends to extend or straighten out the foot on the leg; and of the latter, to flex the toes on the sole of the foot; while the action of the muscles on the posterior surface, the *Gastrocnemius*, the *Soleus*, and the posterior *longus digitorum*, &c., tends to flex the foot upon the leg anteriorly at the ankle—that of the two former by pressing down the *os calcis* as a lever, and of the latter by extending and directly raising the toes. *

A curious circumstance, confirmatory of the correctness of this view of the action of the muscles of this region, is mentioned by Mr. John Hunter, who suffered from a fracture of the tendon of the *gastrocnemius*, called the *tendo Achillis*. When this fracture occurred, he experienced, he says, the greatest difficulty in raising the toes from the floor, in walking across the room.

Nothing has been said of the contraction of the opposing sets of muscles which assists materially in the movements just mentioned, because that will, of course, be inferred from what

had been said above; and to avoid encumbering the subject, relating to the physiological principle here advocated, we have omitted altogether the consideration of the mechanical principles of the Lever and Pulley that are involved in all the movements of the extremities.

GENERAL ORDER IN REFERENCE TO SANITARY PRECAUTIONS.

GENERAL ORDER—NO 5.

*Headquarters Department of the South, }
Hilton Head, Port Royal, S. C. April 7., 1862. }*

1. The Major General commanding desires to call the attention of the officers and men in this department to the paramount necessity of observing rules for the preservation of health during the warm months upon which we have now entered. There is less to be apprehended from battle than from disease, the records of all campaigns in climates such as this showing many more victims to the neglect of sanitary precautions than to the skill, endurance, or courage of the enemy. With proper care exercised, and certain simple rules of hygiene observed, the hardy soldiers of the Union, inured to toil and fortified by habits of industry, temperance, and cleanliness, have nothing to fear from the climate of the department in which it is their privilege to serve. During our war with Mexico the soldiers of New England, the Northwestern and Middle States, and the adopted citizens serving in our army, suffered far less from the diseases incident to a semi-tropical climate than the soldiers from the States embraced in this department. Though not so well accustomed to excessive heat, their physical energies had been more fully developed by habits of steady industry, and their constitutions presented greater natural obstacles to the inroads of malaria. Anxious that the men of his command may be preserved in the full enjoyment of health to the service of the Union, and that only those who can leave behind them the proud epitaph of having fallen on the battle-field in defence of their country shall fail to return to their homes and avocations on the termination of this unholy rebellion, the Major-General commanding, in conformity with the excellent advice of Surgeon George E. Cooper, United States Army, Medical Director of

the Department, hereby establishes the following rules for the sanitary government of all the troops at present serving, or hereafter to serve, in Georgia, South Carolina, and Florida, and will hold all officers having the charge of camps or post, to a strict responsibility for their enforcement.

II. Care will be taken in the selection of camping grounds to avoid as much as possible the vicinity of malarious morasses or swamps: and the tents, in so far as practicable, are to be faced to the south. Each camp will be thoroughly policed twice each day, morning and evening, and all garbage or refuse matter will be collected and buried in the sinks.

III. Each tent will be screened or covered at the top and half-way down the sides with an arbor of brushwood or palm leaves, and shall be floored, whenever lumber can be procured, at an elevation of about three inches from the ground. When this cannot be done, each soldier will have a bunk raised eighteen inches from the ground on side poles, supported by forked sticks. All Quartermasters, to the extent of their ability, will furnish barrel staves to be placed across these side poles, and will issue the necessary lumber on receipt of proper requisitions.

IV. Tents will be struck at least three times each week, and every article of bedding and clothing taken out and aired, the flooring and bunks to be thoroughly cleansed before the tents are re-erected. On the days on which the tents are not struck the sides will be raised and kept raised for the purpose of ventilation; and during the nights free ventilation will be secured by having the centre seen in rear of the tent opened for the space of two feet, and kept open by the insertion of a forked stick. An officer of each company will inspect the tents of his men nightly, except during stormy weather, to see that this important provision is carried out.

V. Sinks of the proper size, screened with brushwood or palmetto branches, shall be sunk at suitable distances on different sides of each camp, and the bottoms of these will be covered each morning with a layer of sand or clay about a foot thick. It will be the duty of the camp police to see that only the sinks on the lee side of the camp are used.

VI. Fresh meat is to be issued as often as practicable, and commanding officers, while near the seacoast or any pieces of water in which fish exist, should encourage such of their men as are off duty or not otherwise employed, to fish during the cool hours of the morning and evening, not later than nine A.M. in the morning, and not earlier than six P.M. in the eve-

ning. In a scarcity of fresh meat those troops in the most exposed and unhealthy situations are to be first served—the troops stationed in the batteries on the Savannah river, for instance; and to all troops so placed a large share of vegetables, in addition to the ordinary rations, should be sent.

VII. Vegetables, fresh or prepared, must be issued frequently to all the troops, and an extra issue of coffee furnished to the men on guard during the night, just previous to their being marched to their respective stations. The Chief Commissary of Department will see that the estimates and requisitions necessary to fulfil these requirements are forwarded to the Commissary General without delay, and will report to these head-quarters any failure of brigade or regimental commissaries to make due requisition for the supplies of the troops under their charge, in conformity with the terms of this order.

VIII. Breakfast will be ready for the men as soon as they leave their tents, which must not be until after sunrise. Except when immediately in face of the enemy, or when especially ordered by the commanding officer, reveille will not be sounded until half an hour after sunrise, by which time the sun's heat will have absorbed the miasma of the night dews. All the men will be furnished with straw hats, and will be required to bathe or wash themselves thoroughly at least twice each week, and change their underclothing once a week, or oftener if practicable. The hair and beard will be kept closely trimmed; and sentry boxes of lumber or small shade arbors of brushwood will be erected at all points where sentries are permanently stationed. All soldiers on night picket or sentry duty will be provided with india rubber ponchos.

IX. The proper cooking of provisions is a matter of great importance, more especially in this climate, but has not yet received from a majority of the officers in our volunteer service that attention which is paid to it in the regular army of the United States, and by the armies of Europe. Hereafter, an officer of each company will be detailed to superintend the cooking of provisions, taking care that all food prepared for the soldiers is sufficiently cooked, and that the meats are boiled or roasted, not fried. With a little care on this point, and the advantages both to health and comfort of good cooking explained to the men, much good may be effected.

X. All soldiers on duty in districts especially malarious, or on avoidable fatigue duty during the hot hours of the day, should be given quinine in prophylactic doses, each dose combined with half a gill of whiskey, every night and morn-

ing. The certificates of regimental surgeons will be requisite to cover such issues.

Officers of the medical staff will see that the provisions of this order are complied with, and will promptly report any failure or neglect to the senior officers of the commands they are serving with, and to the medical director of this department.

By command of

Major-General D. HUNTER.

CHAS. G. HALPINE, Assistant Adjutant General.

ORIGINAL COMMUNICATIONS.

CASES IN OPHTHALMIC PRACTICE.

By E. L. HOLMES, M. D., of Chicago.

Occlusion of Pupil and Cataract.—A young man about twenty four years of age was severely burned in the face and eyes, some months since, by the premature discharge of a cannon. He was totally blind for several weeks. After the injuries had healed, four months after the accident, he came under my care. I found the cornea of the left eye so completely covered with opacities that the iris and pupil were scarcely discernible. Yet, at the upper part of the cornea, there was a small transparent portion; from the fact that the patient could perceive but little light through this part of the cornea, there was reason to suspect that the shock and inflammation had seriously injured the retina. There was really no hope that any plan of treatment for this eye could restore vision.

The other cornea, however, was perfectly transparent, with the exception of a few minute opaque spots on its outer half, produced, without doubt, by grains of powder. The iris had evidently suffered from inflammation, since it was somewhat discolored, the pupil being much contracted, irregular, and

attached to the lens, which was quite opaque. Atropine had scarcely any effect in dilating the pupil. With this eye the patient could barely see to walk with the assistance of a staff, where he was acquainted. The palpebral conjunctivæ of each eye were slightly granulated; but the sulphate of copper, applied daily in crystal, soon restored the lid to a healthy condition.

The double operation, for artificial pupil and for cataract, alone was apparently indicated. The first operation was performed by making a small incision, less than a sixth of an inch in length, into the anterior chamber through the nasal side of the sclerotic, about a sixteenth of an inch behind its union with the cornea. By means of a small-toothed forceps, introduced into the anterior chamber, a piece of the iris was torn away and excised, leaving quite a well formed pupil situated at the inner side of the iris. No inflammation followed, and in a few days the patient was able to walk out with the eye shaded. At the expiration of a month the cataract was thoroughly broken up by a needle passed through the sclerotic, and in a short time absorption had so far progressed, that the pupil became quite clear and vision much improved. In a few weeks more the patient was able, with the assistance of a cataract glass of five inch focus, to see distant objects distinctly, and read or write with a glass of two and a half inch focus.

Operation for Soft Cataract—iris and lens adherent.—F. H. a carpenter from the country, German, aged about 25 years, had suffered from cataract for more than a year. In December last he had been unable for three months to discern objects with this eye. The other eye had also become quite dull from the same condition of the lens. I found the left pupil active under the influence of light, but irregular; the lens very opaque, of a uniform milky color, and not much enlarged, as is often the case in cataracts which form rapidly. The iris was attached to the nasal side of the lens, nearly a sixth of an inch in extent. The patient had never experienced

pain in or around the eye, and was not aware that the iris had ever been inflamed. I determined to break up the cataract freely by means of a needle passed through the sclerotic. As adhesions between the iris and lens are sometimes quite readily broken, without injury to the iris, I hoped to be able to separate the cataract from the iris with the needle. Unfortunately the capsule of the lens resisted the needle more than I anticipated. In breaking up the lens the iris was put considerably upon the stretch, and, I feared, somewhat injured. The lens, however, was completely broken up and fragments projected through the pupil. The central portions of the cataract seemed reduced almost to a fluid condition. The next day the eye was somewhat congested; the pupil was contracted and the patient complained of considerable pain in the eye. As excision of a portion of the iris (iridectomy) has been shown to render the iris less liable to inflammation after injury, I at once resolved to excise a portion of this membrane and to extract the fragments of the lens. After administering chloroform, I made a straight incision about a quarter of an inch in length through the nasal side of the cornea as near as possible to the sclerotic, and as in the preceding case, removed a portion of the iris. By means of a small "scoop" the entire cataract was removed, leaving the pupil perfectly clear. The next day the pain had entirely subsided. The patient was kept in a darkened room for three weeks, when the incision had healed, and vision, even without a convex lens, was found to be remarkably good. The pupil, of course, was somewhat irregular. In three months the patient returned to the city for me to select a suitable lens. With one of three and a half inch focus, he was able to pursue his ordinary occupation.

Pannus, granulations, &c., of eight years standing.—The following case is reported simply as an example of the recuperative powers of the system in certain diseases of the eye. An Irishman, about 47 years of age, was attacked at the East, as he stated, eight years previous to consulting me,

with inflammation of the conjunctiva. In spite of all treatment he became blind. He was subsequently treated in New York and other places at the East and also in Chicago without benefit. For eight years he had been unable to do a day's work. His health had suffered seriously from want of exercise and from confinement in the house. At the time I first saw him, both corneæ were so densely covered with vessels as to conceal the pupils; the palpebral conjunctiva of the lids of each eye was not only granulated, but also atrophied; the lower cilia being very irregular, and directed against the globe. The severity and duration of the disease and the ill health of the patient rendered the prognosis as regards the eyes very unfavorable. By removing a portion of the integument immediately below the cilia of each lower lid, the trichiasis was removed. The daily application of the sulphate of copper in crystal to the inverted lids, reduced the granulations and caused absorption of the vessels and organized lymph of the cornea. Especial attention was directed to regular exercise in the open air, good diet and the use of tonics. The general health soon improved; the cornea at the end of three months became quite clear, and in less than a year had resumed its normal transparency. The iris and lens had remained in a healthy condition for eight years during all this protracted disease.

A CASE OF ECLAMPSIA.

May 3d, 1862. Was called in to see Mrs. G., in this city; aged 20; about six months advanced in first pregnancy. Generally healthy and even robust. Never has been sick, except some dysmenorrhœa accompanied with nervous disturbance during the catamenial periods. Married seven months. For some little time past, has been occasionally

attacked by slight cramping, with a choking sensation in the throat. No loss of sensation or consciousness, and the disagreeable feelings lasted but for a few minutes. Bowels slightly constipated, but no digestive derangement, save the usual morning sickness.

Ordered a saline laxative, and a mixture of Fl. Ext. Valerianæ, Sp. Ammon. Aromat. and Fl. Ext. Hyosey.

May 4, 12 M. Sent for in haste. Patient had been in strong and general convulsions since 11 A. M. Unconsciousness; inability to swallow; skin hot and perspiring; face flushed; eyes injected; pulse 110, full and bounding; veins distended upon the temples and arms, as though varicose; respiratory movements irregular and choking; the throat stuffed with mucus; tongue and cheeks swollen, having been lacerated by the teeth during the spasms. There had been no fecal or urinary evacuations since the day previous, but the bladder was not distended.

A powerful contraction of the uterus would commence about once in six minutes, lasting not more than five or ten seconds, and then giving way entirely, the muscles of the voluntary system would convulse in the most fearful manner.

On examination *per vaginam*, the os was found not dilated in the slightest degree, and rigid.

As no medicine could be swallowed, as was proved by repeated efforts, ordered a large enema, for the double purpose of clearing the intestine and acting as emollient to the irritable uterus. At the first convulsion the enema would be thrown out with great force, without any of the other intestinal contents. This was repeated several times without success.

Then sought to put the patient under the influence of Chloroform. It could not be seen that, two ounces, carefully held to the lips and nose, produced the slightest impression. Venesection to perhaps twenty-four ounces. It did not seem to mitigate either the force or frequency of the spasms. The case was so situated that there was no possibility of using the

warm bath, the effects of which in such cases I have occasionally seen beneficial.

After the bleeding, however, on recourse to the Chloroform, inhalations, there seemed a little more impressibility, but it could only be said that the paroxysms did not become more violent or frequent. Drew from the bladder about six ounces of high colored and offensive urine.

7. P. M. Dissolved a grain and a half or two grains (not weighed) of Morphine in a couple of ounces of solution of starch, and administered *per rectum*, forcing its retention with a folded napkin. Twenty minutes after the convulsive action began sensibly to diminish. At 8 o'clock, there was no convulsive action, but restlessness at periods of five or ten minutes, which, by abdominal palpation, were found to coincide with uterine contraction. Before 9 o'clock these had pretty much subsided. At 10 o'clock there were symptoms of recurring paroxysms. Repeated the enema. From this time until nine or ten of the next morning, May 5th, she was kept fully under the influence of the Morphine.

I had ordered that at any time during the night, when it was found that she could swallow, she was to take a cathartic composed of \mathcal{R} Hydrarg. Sub Chlorid gr. xij, Carb. Sodæ gr. x, Pulv. Ipecac gr. j. M. This was given at about 2 o'clock A. M. Had not operated at 11 A. M. of the 5th.

It was evident that the spasms tended to return with about equal violence as the effects of the Morphine passed off. Ordered a strong enema of Senna and Magnes. Sulph. This passed off at about 1 o'clock, P. M., with abundant evidences of mercurial influence, but with no remarkable amount of fecal matter. Soon after this evacuation consciousness became more distinctly manifested, and she would make the usual affirmative or negative signs in reply to inquiries. *Os uteri* evidently a very little dilated, but uterine contraction not noticeable.

Ordered diuretic mixture of Acet. Potassæ, Sp. Nit. Dul. and Morph. Sulph.

8 P. M. Has rested quietly. No spasmodic action save occasional choking sensations which soon pass off. Directed mixture continued, and the injection of Morph. and Starch to be repeated in night if necessary—but patient did not require it.

May 6th, 9 A. M. Towards daylight the patient gave evidences of severe pain which the attendants supposed was premonitory of the usual convulsion. But within a very few minutes a little sharp cry astonished both mother and attendants. A six months child barely announced its indignation at its untimely entrance to the world—drew a few idle breaths irregularly and imperfectly, and then gave up its tiny ghost—a couple of hours before my arrival. The placenta had not been thrown off, although the pains were quite severe. It was however readily removed, and several firm clots above it, which seemed to produce much uterine grief.

The after pains continuing quite severe, and wandering suspiciously to other parts of the body, ordered an anodyne and took my leave.

8 P. M. Patient has been tolerably quiet, has taken a little toast water and tea. Troubled with occasional choking sensations, only relieved by sitting up in the bed, a position of course contrary to instructions; occasionally, slight general cramping. Pulse getting a little too hard; skin a little too dry; tongue heavily coated; breath foetid; and urine scanty, thick and offensive. Repeat mercurial cathartic, and secure its operation in the morning with Liq. Potassæ Citrat.

May 7th, 12 M. Cathartic has operated finely. Lochia free, but not profuse. Milk appearing in the breasts. Has a little appetite, and generally about as well as patients after an ordinary labor.

From this time until the 12th she had no marked symptoms save persistence of the choking sensations, for which I prescribed the usual antispasmodics. It turned out, however, that none were taken. Upon the twelfth, her bowels being constipated; tongue heavily coated; urine scanty, thick and

dark ; with some febrile excitement and nervous disturbance, ordered a cathartic: \mathcal{R} Hydrarg. Sub Chlorid. gr. vj, Pulv. Rhei gr. v, Pulv. Ipecac gr. ss. M. To be taken at bed time. Seidlitz Powder in morning, if necessary.

May 5th. Cathartic had relieved general symptoms, but she still complains of the choking sensation in the throat as troubling her very much. Ordered pills containing each a gr. of Valerianate of Zinc, $\frac{1}{4}$ gr. Ext. Belladonnæ and three gr. Ext. Gentian. One to be taken three times a day. Not forgetting a generous diet and fresh air. The case has presented no more trouble worthy of note.

Bleeding in this case was only of indirect advantage—possibly favoring the action of subsequent agencies. In consequence of displacement of the bandages by the struggles of the patient during my absence, the loss of blood was considerably more than intended. The Chloroform proved inefficient, although the article was a good one and carefully and lavishly exhibited. Morphia finally controlled the convulsive action. The mercurial first showed that the seat of the difficulty was reached, but too late to prevent the premature expulsion of the fœtus. The latter was not to be regretted, for the strong probability is that the mother would have been obliged to run the gauntlet of each recurring monthly period, with all the incident hazard.

A.

CHICAGO, May 22d, 1862.

EDITORIAL.

The Sanitary Commission.—An eastern contemporary seems to think, as we used to before we had “farther light,” that the Government officials of the medical department have done their duty in furnishing medicine and hospital supplies. It may be so at the East, where millions upon millions have been lavished upon political favorites in contracts of every conceivable sort, including straw hats, linen pantaloons, herring, etc., etc.; but “out West” it has been different. The Government officials entrusted with this matter have been derelict to the last extreme. Hundreds of lives would have been lost, and thousands would have experienced all the horrors of inattention, neglect, and we might almost say of starvation, if it had not been for the well directed efforts of the western agents of this benevolent association.

Whilst it would seem almost invidious to particularize, we cannot forbear especially mentioning the name of the Hon. Mark Skinner, Chairman of the Chicago Sanitary Commission, a distinguished citizen, and, we are proud to say, a leading Trustee of Rush Med. College, as peculiarly worthy of honor for the efforts which he has put forth and the success which has attended them.

Occasionally there is no doubt these supplies have been misappropriated or even wasted, of which certain startling evidences have been reported, but nevertheless the bulk, forming an enormous aggregate, has reached its destination and filled a *hiatus*, previously *valde deflendus*.

Surgeon J. B. Porter.—The newspaper readers must have noticed certain grave charges against Surgeon Porter, U. S. A.,

in charge of the General Hospital at Alexandria. Correspondents of the *N. Y. Tribune*, and other sensation newspapers, alleged brutality of treatment, and neglect of his patients. A Court of Inquiry was promptly convened, and the matter thoroughly investigated. Surgeon Porter, with conscious pride of integrity, scorned to introduce a single witness. His accusers were convicted out of their own mouths, and had the mortification of having Surgeon Porter, not only triumphantly acquitted, but expressly complimented in strong terms by the Court.

The only charge partially sustained had reference to a temporary bad quality of the bread supplied—a thing proven to have been no fault of his. We compliment this honorable, high-minded, and distinguished officer on his complete vindication.

Foreign Correspondence.—Dr. Edward L. Holmes, of this city, now visiting Europe for the further cultivation of the specialties to which he has largely devoted his attention, promises us a series of letters during his absence, which will appear from time to time in the *JOURNAL*.

Dr. Holmes having some years since spent considerable time in the prosecution of his favorite branches of professional study in the Continental hospitals, having already a large personal acquaintance, and being familiar with the German and French languages, will have peculiar facilities in his present visit, which we hope to share with our readers in results.

In his absence we venture to write, what we should not dare to write were he here, that upon excellent native abilities, cultivated by liberal education, he has engrafted large general professional attainment, with an exceedingly minute and comprehensive familiarity with diseases of the Eye and Ear.

Earnestly opposed as we are to specialism in practice, we cannot object to it where, as in the case of Dr. Holmes, it is not exclusive but based upon general professional acquirement.

Camp Diarrhœa.—One of our professional friends recently visited the army of the Union in a volunteer capacity. He found an Illinois regiment deprived of one of its surgeons by death and of the other by disease. It had no medicines or hospital supplies of any sort whatever. It had *three hundred and forty-nine* on its sick list. The prevalent disorder was diarrhœa. Undaunted by the difficulties before him, he went into the forest, gathered white oak bark, the root of the wild black berry, and managing to get some Capsicum and Carbonate of Ammonia, almost surreptitiously, he made a decoction of the first three and added the last. With "only this and nothing more" the sick list was reduced in a single week to *eighty*.

General Grant, who was suffering from the same difficulty, was relieved at once by the same remedy. The hint may be worth something to the medical attendants of the grand army. We call upon the Dr. to "relate his experience," over his own signature. The facts have been given us from a most reliable authority.

A System of Surgery ; Pathological, Diagnostic, Therapeutic, and Operative, by Samuel D. Gross, M. D., Professor of Surgery in the Jefferson Medical College of Philadelphia, etc. Illustrated by twelve hundred and twenty-seven Engravings. Second Edition. Much enlarged and carefully revised. In two volumes. Blanchard & Lea. 1862.

We are gratified to be able to announce a new edition of this Cyclopædia of Surgery. Considering the large size of the work and its expensiveness, the extremely rapid sale and its exhaustion of an entire edition, not only proves the value of the work, but speaks well for the intelligence of American surgeons. The Second Edition bears evidence of careful revision, on nearly every page ; and the whole sections of new matter prove with what care and pains-taking the distinguished author has labored to render his work worthy of the patronage of the profession. We cannot enter into even a specification of the additions which have been made, but will simply add that the work is still the most complete exponent of the science and art of surgery in our language.

We borrow from a contemporary the above brief notice of what we are certain must be a work meriting fully the encomium contained.

The Editors were notified of the forwarding of the work to this JOURNAL. Even the errand boy, who thinks he delivered it, has appeared on the stage, but the volumes we can lament for, as Rachel for her children, because "they are not."

The books were delivered, but not to the Editors or their representatives. "There is a bird i' the air" which whispers, (if it be a bird, and a bird ever whispers,) *who* is enriched by their surreptitious possession. He needs them, yet remember, Friend, *multitudo librorum sæpe est nubes testium ignorantie possessoris*—and you need no witnesses of that transparent fact in your case. You may eat the volumes, an' yon wish, but we fervently trust that they may prove as bitter in the belly of your conscience (if you have a conscience), as did the little book masticated in the Apocalypse. If you have a Bible, Friend, look up the allusion—a little Bible at all events will be (and long before this would have been) excellent in your case. Finally, may ascarides tease you, and calculus "gravel" you, and dyspepsia plague you, and scabies stick to you, until you send back those books. We will reward you for this virtue *in extremis*, with a bottle of cocoaine warranted pure, and "no questions asked."

The Principles and Practice of Obstetrics. By Gunning S. Bedford, A. M., M. D., Professor, &c., &c. Second Edition. Carefully revised. New York: William Wood, 389 Broadway. 1862. 8vo., pp. 763.

This book has had a marvelous success, and yet we need scarcely say, not beyond its deserts. Not only is the first edition already exhausted, but it has enjoyed the rare distinction of having been translated and published in several foreign countries, where it has been received with high and almost universal commendation.

It takes rank at once as a standard work and authority in the department which it represents.

It is thoroughly readable as well as scientific—the author recognizes the fact, of which too many are oblivious, that *stilts* are not necessary to an impressive style. It is systematic, without being cramped or rigid. It is comprehensive, without being tedious. It is learned and exact, without being pedantic and finical. In his general views the author is judicious, sound and, what we especially delight to see, conservative. He knows how to acknowledge the general truth that a “meddlesome midwifery is bad,” and yet with perfect consistency to direct at suitable times prompt and even heroic interference. The sentences on the abuse of embryotomy we commend especially to the earnest consideration of all junior (and a good many senior) practitioners. This latter feature of his work we rejoice to see especially commended by foreign reviewers.

Prof. Bedford evinces, it is not out of place to observe, throughout his volume, an appreciation of the true feminine character, and the relation of the accoucheur to his suffering patient, every way indicative of that delicacy and refinement which should distinguish the professional gentleman.

We predict that the vast labor, extensive research, enthusiasm and ability which Prof. Bedford has lavished upon this book, will carry it through, not only this, the second, but many subsequent editions.

Chicory in Coffee.—M. Lawey, referring to the great efficacy of good coffee as a substitute for brandy in soldier's rations, its less fugacious qualities as a stimulant, its probable prophylactic energy against malaria, its powers for counteracting the physiological effects of heat, and tendency to restrain alvine fluxes, calls attention to the fact that chicory, with which it is commonly largely adulterated, has none of these qualities, and that being laxative, it favors the occurrence of diarrhoea and dysentery. The point seems worthy of in-

vestigation, so that when soldiers by a somewhat questionable philanthropic or finical policy, are supplied with coffee instead of spirit rations, they may not be cheated of this even, and then poisoned by chicory or other knavish substitution.

Secale Cornutum in Delirium Tremens.—Several cases of recovery after the use of Ergot in Delirium Tremens have been recently reported. A writer in the *Am. Med. Monthly*, who says, however, that he has employed it in but one case, admits having been impressed by the apparent power of the remedy. Ice-water baths, Digitalis, Morphia in large doses, Alcohol ditto, and indeed a half score of other agents have each their advocates among late writers. But Delirium Tremens is cured by no drug. It is only met by restoring depraved or lost nutrition.

☞ *Fucus Vesiculosus as a Remedy for Obesity.*—M. Duchesne Duparc strongly recommends this plant as a means of diminishing an uncomfortable tendency to obesity. He reports three cases in which its use was attended by a decided diminution in weight, without any other appreciable effect. In one case, the loss was from twelve to fifteen pounds in about two months; in another, the diminution in weight was thirty pounds in three months; and a third, there was a decided relief from the discomfort under which the patient had long labored, but the record is incomplete. The remedy is best administered in the form of alcoholic extract, of which there may be taken as much as three or four grammes daily. Great care should be used in the collection of the fucus, as it is easily confounded with other marine plants, which are entirely inert, so far as the peculiar efficacy of the vesiculosus is concerned.—*Boston Med. Jour.*

Tetanus successfully treated by Chloride of Barium.—The *Gazette des Hopitaux* reprints from the *Italian Medical Gazette* the details of a case of tetanus, in which the chloride of barium was successfully administered. It was prescribed in the proportion of sixteen grains to a pint of distilled water, the whole to be taken in the course of twenty-four hours. At the end of the eleventh day the symptoms had nearly ceased,

and the dose was reduced to eight grains a day; on the sixteenth day the medicine was discontinued, and the patient left the hospital, well, on the eighteenth day. Several other cases of tetanus are referred to, in which this remedy has been employed with success in Italy, during the past two years.—*Boston Med. Jour.*

Poisoning by Strychnia.—Dr. Julian Harman reports, in the *Boston Journal*, May 1st, a case of poisoning by strychnia. Something like thirteen grs. of pure crystalized strychnia were taken in all. It was taken in two portions after dinner. Severe spasms ensued, which were quieted by Chloroform. An emetic was administered, and after its action the Chloroform was renewed. "At 7 o'clock, I gave six grains of Iodide of Potassium, with four drops of Tincture of Iodine; at 9, gave five grs. of Calomel, with one-third of a grain of the Sulphate of Morphia, followed by Salts and Senna in the morning. During the night there was great muscular soreness, burning heat of the stomach and bowels, and vomiting of ropy fluid, which gradually abated, till in a few days the patient was well."

The Doctor observes that the mingling of the poison with the food prevented rapid absorption, and that a portion of it was probably ejected by vomiting. The Iod. Pot. had probably little effect in neutralizing the poison, "but the Camphor and Chloroform were probably far more effective than would have been the freest use of the best old Bourbon!"

It will be recollected that previous to the execution of Gordon, the slave captain, it was said that he had attempted his own life with Strychnia, which, whether true or false, was made the excuse for intoxicating him with Whiskey to the hanging point.

Bromide of Potassium in Epilepsy.—Several cases have been recently reported of successful treatment of Epilepsy by Bromide of Potassium. The usual dose is about three grains three times a day. It will probably be found to have about

the average success of other empirical remedies for this variable and often intractable affection. It is suggested as particularly useful in cases connected with, or dependent upon, disorder of the sexual apparatus. The Bromide seems antaphrodisiac.

Essays.—Dr. John P. Spooner, of Dorchester, Mass., is publishing a series of papers in the *Boston Journal*, on "The Different Modes of Treating Disease." We trust that he will combine them and issue in a more permanent form. A good book on this subject at the present time is a desideratum.

Podophyllum Peltatum.—This vegetable threatens to displace a variety of hobbies just now. European writers have taken it up, and some of them have grown enthusiastic. The idea is advanced that it is about the only reliable chologogue in existence. It is asserted to be antisyphilitic beyond Mercury and Iodine. That it will promote or restrain discharges according as the indications are for one or the other, &c., &c.

We congratulate our hobby-riding friends on the cheapness and abundance of the new panacea. In this respect it is far ahead of Verat. Virid. and Chlorate of Potash. Having used it often within the last sixteen years, we are free to say, that it is the best indigenous substitute for Jalap of any substance with which we are acquainted. Its fresh root will prove actively emetic as well as cathartic—when dried it seems to lose emetic power. As an alterative it will rank with Sarsaparilla.

Surgeon General of the U. S. A.—The medical profession of the country are honored in the selection of Prof. Wm. A. Hammond, of the University of Maryland, as the new head of the Medical Department of the Army. He is well known as the author of numerous and valuable contributions to our periodical medical literature, and as occupying a front rank among experimental physiologists.

We believe he was formerly, for some ten or twelve years, an assistant surgeon in the regular army, resigning the position two or three years since. His executive qualities are said to be of a very high order, and his patriotism has been proved unimpeachable. In his present position he has an opportunity for exercise of high faculties of mind and practical knowledge, unequalled since the meridional days of Baron Lawcy.

Chopart's Operation.—Douglass Bly, M. D., reports to the N. Y. Medical Society: "The operation known as Chopart's, severs the flexors of the foot, and should *never* be performed under any circumstances whatever. The moment the flexors are severed, the extensors, having no antagonists, extend the foot on the leg, and cause the amputated surface to point almost directly downward. This deprives the patient of all power to use the remaining portion of the foot, and also renders him incapable of wearing a useful substitute. I am aware that, to obviate this difficulty, some surgeons have severed the tendo-achillis, but that has proved ineffectual, and it is only a partial relief at best. Therefore, amputation at this point renders the patient a hopeless cripple. The wound is slow to heal, *always tender*, often ulcerating, and the remaining portion of the foot is generally a curse to the patient as long as he lives, unless he submits to a secondary amputation."

Treatment of Whitlow.—All the asserted abortive methods of treatment are almost always useless. Those which can be relied on are the local antiphlogistics and cataplasms of mercurial ointment. They will at least moderate and limit the suppuration. The only really abortive treatment which can arrest the progress of the disease, is by early incisions, made where the pain is most severe, extended through the length of the inflamed part and deep in proportion to the gravity of the disease. When suppuration has commenced, incisions are indispensable. The bistoury is plunged down to the pus, to the tendinous sheaths or the periosteum, if they are implicated,

and the tumor divided in its whole length. If the pain returns, it must be followed up with the bistoury, wherever it appears. After the incision, the hand should be kept for some time in warm water, or a poultice be applied; the wound is afterward dressed with lint and cerate. Constitutional symptoms should be treated by diet and emollient drinks. Emetics and purgatives are indicated by symptoms of gastric or intestinal disturbance, and would also be useful as revulsives. Complications and sequelæ must be treated by appropriate measures.—*Dr. Laurel.*

Tannin as Substitute for Peruvian Bark.—*M. Leriche* in a recent memoir, awarded a prize by the Society of Medical Sciences of Brussels, revives the use of Tannin as an antiperiodic, but says it must be given in larger doses than formerly. Whatever the type of the periodic fever he recommends that the Tannin should be given in from twenty to thirty grain doses before the paroxysm. Two or three doses are usually sufficient to effect a cure. If the fever should not yield, fifteen grains only should be given in a mixture to be taken a table spoonful every hour. He has never seen the remedy fail in its effects. He has administered Tannin in 144 cases, ten of which were still under treatment at the time of publishing his memoir. 134 had been entirely cured, and two of these were men who had recently returned from Algiers with the African fever.

This treatment reminds of the gelatine cure of old time—but the question arises—when do the bowels get open?

Cubebs in Simple Urethritis of Women.—*M. Trousseau* remarking upon the frequency of simple urethritis both in young girls and married women, "characterized by a frequent desire to make water, with severe smarting during micturition, and vesical tenesmus lasting some minutes afterwards," commends freshly powdered cubebs as remarkably efficient. He advises from half a dram to a dram, twice a day at meals. "It should be continued several days, and as long as the

symptoms last; when improvement begins the cubebs are given only once a day for a week, and in the following week, if improvement continues, the cubebs are given only once every second day."

Many cases of this kind, and even of gonorrhœal urethritis, where the cubebs fails to relieve, or disagrees with the patient, will be speedily ameliorated by moderate doses of *Abietis balsameæ*, which may be rendered not unpalatable by solution of Glycerine, or Mucilage and Sugar with Sp. Lavand. Comp. Where balsamic remedies are indicated, this particular one will be found very efficient, and less liable to produce gastric derangement, headache, &c., than those in more frequent use.

Epidemic Influenza.—In an epidemic influenza, characterized by profuse secretion of mucus and spasmodic coughing, sometimes simulating whooping cough, Dr. H. Bradford, of Nebraska, found the following mixture, especially beneficial: R Syrup. Prun. Virgin. ʒ IV: Vin. Ipecac., Vin. Antim. aa ʒ ss; Tinct. Cannab. Indic ʒj; Acid, Gallic, ʒ ss. M. A tea-spoonful every three or four hours.

Causes of Tuberculosis.—Dr. Woody, in a recent paper writes sensibly as follows:

"I would place at the head of the *causes* of consumption those influences in our lives that inevitably produce effeminacy: such as naturally result from the fashionable mode of living. The nervous exhaustion that follows in the train of indolence, the use of warm relaxing drinks such as coffee, tea, etc., the use of tobacco and other narcotics, that make heavy draughts on the brain, the sleeping on feather beds in close seven-by-nine rooms, and sexual excesses, constitute, I think, nine-tenths of the exciting causes of this disease."

Dr. W. thinks that in the young, of both sexes, masturbation is a predisposing and exciting cause that exceeds all others put together. Our own opinion, formed after many years careful observation, is that the number addicted to this disgusting

vice is vastly over-estimated, and its alleged disastrous effects *hugely* exaggerated. The advertising columns of the newspapers afford ample evidence of the spoils which accrue to the nostrum venders, "Howard Associations," *et id genus omne*, from promulgation of such gross notions upon this subject. That occasional instances of fearful effect from this vice do occur is undeniable, but nothing in comparison to the sweeping statements so often made in the premises. It is safe to say that half of the cases of spermatorrhœa, &c., charged so often upon a long discontinued and repented vice, in fact depend upon dyspepsia, or upon the wrong habits of living to which Dr. W. has alluded in the above quotation.

We have in mind the case of a gentleman who came to us with a trifling *Herpes preputialis* which, with deep contrition, he confessed as the probable result of an illicit *coitus* five years previous, although it had only appeared two days before. Everybody knows such cases are the invariable dupes of the advertising knaves who "bleed" without letting of blood, and "cure without mercury." Add now, to cases of this sort, those who long since recollect to have rarely indulged in solitary vice, and let the terrible catalogue of resulting ills be instilled into their minds by such broad asseverations as that above, and the resulting moral, mental, and physical injury can scarcely be measured.

Injections for Gonorrhœa.—Dr. Bumstead, in his valuable treatise on venereal diseases, recommends (p. 57) that previous to injections for gonorrhœa, micturition should be performed, to clear the urethra of matter and to empty the bladder, so that the virus may not be carried before the injected fluid into the deeper parts of the passage, and that there may be no necessity of again evacuating the urine before the medicated fluid has had its full influence, and the temporarily augmented sensibility has abated. He suggests that it is better that quarter of an hour should elapse subsequent to passing the water, before use of the injection. In

our opinion not more than five minutes should be allowed, for in ten or fifteen minutes, in very many cases at all events, the discharge will be found free on the urethral surface, and will tend first to neutralize the medicament, and, again, to be carried into the deeper parts.

This is another of the "little things," but may often determine the speedy cure or obstinate continuance of the disease.

Bicarbonate of Potassæ in Croup.—The *Druggist's Circular* states: Since Dr. Luscinsky, of Vienna, has recommended the bicarb. of soda, Dr. Kellogg has succeeded in establishing the claims of the bicarbonate of potassa, used by himself and others for a long time with decided success. After giving an emetic, he prescribes: \mathcal{R} Bicarb. Potassæ 3 ss; Aq. Fœniculi \mathfrak{z} v; Syrup. Senegæ \mathfrak{z} j. M. A teaspoonful every half hour. In very severe cases he augments the dose to a grain and a half of the salt every quarter or half hour, and sometimes repeats the emetic." This treatment has at least the recommendation that it is a prophylactic against the injurious heroic methods sometimes adopted.

Bebeerine in Menorrhagia.—The *Reporter* recommends: " \mathcal{R} Sulphate of Bebeerine gr. xij; Pulv. Cinnamon gr. xvij; Pulv. Ferri gr. vj. M. Divide in twelve parts. One to be taken every other day during the interval between the menstrual terms. During the flow, especially if it be profuse, the remedy should be given oftener and in larger doses."

We can readily believe the latter statement—a grain of Sulph. Bebeerine, with a grain and a half of Cinnamon and a grain of powdered Iron once in two days would hardly seem competent to control a particularly severe case of menorrhagia. The formula is commended to brethren with homœopathic tendencies as little liable to do harm, even though it does no good. Multiply the frequency of administration by six, at least, and it may prove beneficial in some cases.

Invagination of the Intestine.—In a late discussion in the Royal Med. and Chirurg. Soc., DR. STEWART remarked that he had long since given up the use of purgatives in suspected cases of invagination of the intestines. He is now in the habit of using three or four grains of Extract of Belladonna in a large quantity of water by injection. In one case by mistake this injection was repeated but the poisonous effects were not developed. He had only seen two cases of delirium out of twelve thus treated. He had found the method usually successful.

Dr. S. observed that he resorted to the same plan in cases of poisoning by lead, in which colic and constipation were prominent symptoms.

This is vastly better than the old plan, but sometimes the Belladonna will prove unmanageable and it is variable in its strength. Laudanum or Morphine in large doses by injection we have seen frequently successful even in apparently desperate cases. Meanwhile let it be observed.

Aneurism of the Extremities Treated by Flexion of the Limb. This subject has recently been attracting considerable attention. Several successful cases are reported in the *London Lancet* and other journals. They were for the most part popliteal. The principle upon which the treatment is based is simple. Strong flexion of the limb considerably retards the blood in the main artery, and nearly arrests the pulse. The object in treating aneurism is not to altogether arrest the circulation in it, but to produce such a degree of retardation as will permit the formation of concentric fibrous laminæ on its interior. Absolute arrest of the blood is uncertain, and somewhat dangerous, in result. Retardation is safe and the effect permanent. Cures from flexion of the limb, even in popliteal aneurism, had been secured in six days, although, as a matter of precaution, semi-flexion is advised for several days subsequently. No instruments are needed, a bandage being the only requisite. Attendants are dispensed with, and,

aside from the fatigue of the position, there is little to annoy or distress the patient. Pressure may sometimes be conjoined with advantage. The subject is called to the attention of the profession by Earnest Hart, Esq., Surgeon to the West London Hospital, whose first paper on the topic appeared in 1859. It is a method of rare interest both for its success and simplicity, and the sound physiological ideas upon which it is based.

Ligation of the Funis. That very sagacious obstetrician, Blundell, frequently deprecates the sarcasm: *Parva leves animos capiunt*, as applied to the little things necessary to be known and attended to by the practical accoucheur. Among these little things, our attention is directed to one in particular, by a passage on page 368 of Prof. Bedford's second edition of his valuable treatise on the Prin. and Prac. of Obstetrics. He proposes but one ligature, and says that he perceives no solid reason for two. He very properly observes, that the argument usually advanced in its favor—the liability of the mother to the hazards of flooding through the untied extremity of the cord—is founded on a false hypothesis, as he had previously pointed out when describing the anatomical arrangement of the placenta, and the foetal circulation.

He remarks that :

"1. Two are unnecessary, because the small quantity of blood, which flows from the united extremity of the cord, consists merely of the disgorgement of the vessels on the foetal surface of the afterbirth, and does not come directly from the system of the mother. 2. This very disgorgement, in my opinion, assists in the more prompt expulsion of the placenta."

We admit the fallacy, to a certain extent, of the reason for two ligatures which he adverts to, nevertheless we think that there are valid and important reasons for two ligatures.

1. Two ligatures are more cleanly. The untied extremity of the cord almost invariably distributes considerable blood, which, wherever it comes from, makes as disagreeable a "muss" of the surroundings as though it came from the

uterine sinuses direct. This is almost entirely obviated by the use of two ligatures instead of one.

2. The retention of the blood in the placenta by the second ligature maintains its bulk to such an extent that the tendency to inertia of the uterus, the principal cause of delay in expulsion of the afterbirth, is very materially lessened. By this means uterine contraction is favored, speedy expulsion of the placenta, membranes and coagula is secured, and hæmorrhage prevented, not solely from the vessels of the foetal surface of the placenta, but from the otherwise inert and uncontracted uterus.

3. The distended placenta is the natural stimulus of the uterine contraction which thrusts it out from the cavity, and by securing its full distension by two ligatures of the funis, it will rarely ever be found necessary either to introduce the hand, or even finger, to excite, direct or reflex movements of the uterine muscle.

In the earlier years of the writer's practice, he employed but one ligature, and, as a result, often had to resort to the usual mechanical and medicinal measures for removing the "retained" placenta. But since adopting invariably the two ligatures, the instances where the placenta remains unexpelled, more than a few minutes, have been few and far between.

It may be remarked that the crushing of the vessels of the cord by the lower animals in biting off the funis, not only prevent bleeding from the young animal, but secures also the effect of the second ligature so far as the placenta is concerned. Its mass still remains so great that it is thrown off by the spontaneous action of the uterine muscles, without any necessity for either ergot or titillation of the internal surface of the cervix uteri by the finger. ■

We repeat this may be considered a little thing, but it is vastly more important, practically, than the treatment of *inversio uteri* or "hour-glass contraction." For these two the practitioner may spend a life of active practice without seeing

—whereas the other is to be attended to in every case of obstetrics.

Camp Diarrhœa.—The Army of the Union is suffering from the scourge of camps—diarrhœa, which, however, is troublesome by its disabling the men from duty, rather than from resulting mortality. There is no doubt that nineteen out of twenty cases might be prevented by attention to the plainest hygienic precepts.

It is presumed that the Southern Army are similarly afflicted, for an extract from a Memphis paper recently appeared among the daily telegraphic dispatches, setting forth that "Gen. Beauregard's effective force is essentially weakened by diseases peculiar to Mississippi bottoms." It is believed they are evacuating.

Autumnal Diarrhœa, &c.—Dr. Hines of Nottingham recommends, in the *London Lancet*, an old treatment: \mathcal{R} Ingus. Gent. comp. \mathfrak{z} viij.; Tinct. Opi. 3 iss.; Acid. Nitric gtt. XX. M. An ounce after every liquid stool or painful alvine evacuation. He uses at the same time sparing draughts of ice-cold mint tea.

ANNUAL MEETING OF STATE MEDICAL SOCIETY.

Whereas the President, one Vice President, and the Chairman of most of the Standing Committees, together with a very large proportion of the members of the Illinois State Medical Society, are on active duty as Surgeons and assistant Surgeons with different divisions of the Army entirely beyond the limits of the State; and, whereas, many more are now, and will be for several weeks to come, engaged as volunteer Surgeons to aid in taking care of those wounded in the recent severe battles in Tennessee, therefore we, the undersigned, give notice that the Regular Annual Meeting of the State Society will be *postponed* until the first Tuesday in May, 1863.

HENRY GOULD.

NATH'L ENGLISH.

ANDREW MCFARLAND.

Committee of Arrangements.

N. S. DAVIS, Permanent Sec'y.

Clinical Lectures on the Diseases of Women and Children. By Gunning S. Bedford, A. M., M. D., Professor of Obstetrics, the Diseases of Women and Children, and Clinical Obstetrics, in the University of New York; author of "The Principles and Practice of Obstetrics." *Medicus curat morbos, natura sanat. Hippocrates. Seventh Edition. Carefully revised. New York: William Wood, 389 Broadway. 1862. From the Author.*

This work is too well known and widely esteemed to render it necessary for us to do more than barely announce another edition.

The great variety of cases brought under review, give the work almost the characteristics of a systematic treatise, which it excels in interest by the life-like delineations that the clinical lecture gives opportunity to present.

The style which some reviewers have criticised, as rather too "free and easy" for a scientific work, has the advantage of interesting and sustaining attention, whilst the portraiture of diseases is so clear and distinct that he who runs may read.

Dr. Bedford never is obscure, his ideas are always transparent, and although here and there practitioners will differ as to his reasoning and methods, they will always know exactly what they differ from, so that there will be no occasion for *bush-fighting* in the matter.

We heartily commend the book to those of our readers who are not already possessed of it.

Constitution, By-Laws and Code of Ethics of the Will County (Ill.) Medical Society. From Dr. G. S. Thomas, President of the Society.

The objects of this association are well set forth in the preamble to the constitution:

"Inasmuch as an institution so conducted as to give frequent, united and emphatic expression to the views and aims of the medical profession in this county, must at all times have a beneficial influence, and supply more efficient means than have hitherto been available here for cultivating and ad-

vancing medical knowledge, for elevating the standard of medical education, for promoting the usefulness, honor and interest of the medical profession; for enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men, for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those who are engaged in it, therefore be it *Resolved*, in behalf of the Medical Society of the County of Will, that for the organization and management of the same they adopt the following Regulations."

The Society is organized as auxiliary to the State Medical Society, and adopts the code of ethics adopted by that Society, at Springfield, June, 1850, any important violation of which is to be deemed sufficient reason of charge and expulsion. One very important By-Law of the Society we quote as suggestive:

"Sec. 8. Each member of this Society shall keep a record of all important cases that may occur in his practice, and such other facts as may fall under his observation, of especial interest to the profession, and report them to this Society and medical journals for publication."

We congratulate the Society on both its present condition and prospects.

Hygiene of the Sewing Machine. An advertisement of the widely known and justly celebrated sewing machine of Messrs. Wheeler & Wilson appears in the present number of the JOURNAL, and we deem the occasion a fitting one in which to notice certain matters of hygienic importance strikingly connected therewith.

Since the fall of Adam, and the stitching of the primeval garment, a certain and gradually increasing amount of sewing has been required. Of one-half the race it has constituted the principal occupation, and unable to accomplish all demanded, a certain portion of the other half has been called upon to take part in the toil. Hence—tailors and man-milliners.

It is safe to say, that sewing has occupied more of human attention than any other branch of industry. Hood's "Song of the Shirt," wept over by so many, and which has stirred so many philanthropic souls to their very depths—touched but upon the very margin of the matter, the uttermost skirt of its garment—for more than half of the world was "stitch, stitch, stitching," with what of detriment to mind, body and soul it is worth while to think.

The tailor, who is but a temporarily hired Hessian in the great warfare against nakedness, is, by a melancholy adage, "the ninth part of a man"—what shall we say of woman, who, by the inevitable fiat of society, has been from time immemorial reduced to perpetual servitude to the needle?

The present writer thinks, for instance, that the so gravely mooted question of the psychological equality of the sexes can never be decided *pro* or *con* until the women receive their "freedom papers" from this needle-thralldom. There are some three or four millions of colored people on this continent who are obliged to have other people take the trouble to provide for their continuance in existence, and much concern does it give to very many people of humanitarian tendencies, and very much distraction to many other people not altogether humanitarians, but perhaps otherwise.

The needle has some hundreds of millions of slaves even now, although Wheeler & Wilson and some others have put into material shape an edict of emancipation which ought to have caused their crowning with laurels more worthily won than those of Clarkson, Wilberforce or John Brown.

The sewing machine is an organized protest against a slavery more intolerable than that of the Genius to Aladdin's lamp. It accomplishes more for the elevation of the feminine portion of the race, (and mediately of the other half) than did all the chivalry of the middle ages with its troops of gallant knights and squires.

But our space will not permit further allusion to its politico-economical, social or poetical, religious or psychological

relations, we purposed to refer simply to its hygienic influences.

In an article read by A. K. Gardiner, M. D., Professor of Clinical Midwifery, and Diseases of Females, in the N. Y. Med. College, before the N. Y. Academy of Medicine. He asserts broadly, and proves by carefully collated statistical facts, that during an experience of ten years, the health of operators upon sewing machines of all varieties, was in no respect impaired by working upon them. In the factories, where many of the machines were used, not a single case could be found where injurious results could be traced to constant working upon the machines, although some of the girls "worked upon them for a year without losing a single day."

Contrast this with the results of constant, or even occasional use of the old fashioned hand needle, as observed in any neighborhood, even in the country. The dyspepsias, constipation, neuralgia, uterine affections, coughs, emaciation—phthisis!

We extract a couple of paragraphs from Prof. Gardiner's paper:

"The principal diseases said to be caused by the sewing machine are the so-called "female diseases" and spinal complaints. I have had some practice in these diseases, and may be allowed as a matter of personal experience to state that I have never seen a single patient who gained her living by working a sewing machine, who was affected by leucorrhœa, "falling of the womb," "ulcerations of the womb," or spinal difficulty—who ever had an abortion while using it, or who in any way could trace any injury from it. Neither have I had any patients in private practice with any diseases at all attributable to it. I have had many patients who have made up their family and children's clothing for the season, and their "baby linen" just before their lying in, with no injurious effects.

I am aware that the jar of the machine, and the "up and down" vibratory motion are stated to produce abortions, but this seems to be a most erroneous opinion, inasmuch as the "jar" of the machine, if there is any, falls not upon the feet or lower extremities, in which it is not felt in the slightest degree, but entirely upon the arms of the operator, resting upon

the table ; and from this undeniable reason, the alleged analogy between the hypothetical statement, that "the vitality of hen's eggs carried in cars, and subject to their vibratory and oscillating movement, is so destroyed that not one in a score will hatch," does not hold good, even if it can be proved that the human ovum in a healthy uterus is killed by this trembling movement, as is claimed by some. Upon this point, I have also a word to say in a proper place. Overwork, and by one unaccustomed or disused to the sewing machine, may, very probably, in some cases produce an abortion, and so will a long walk in the Central Park, a day's shopping, excessive laughing, even the eating of a bunch of grapes ; yet shall these be denied the parturient woman ? Shall we take the exception for the rule ?"

Another objection which has been urged, is that the sewing machine injures the eyes of the operator. This has been fully negatived by the opinions based on large experience of distinguished oculists, among whom may be mentioned Dr. Geo. A. Bethune, of the Mass. Eye and Ear Infirmary, and Dr. Isaac Hays of Philadelphia, Drs. Wilkes, Clark, Ceccarini, and Stephenson of New York City, and Dr. Clark of New-ark.

The "glass foot" which Messrs. W. & W. have added to their machine, does away entirely even with the theoretic objections upon this point.

The conclusion of Prof. Gardiner's paper is worthy of the careful consideration of every practitioner :

"A body in vigorous health is less liable to be seized with, or prostrated by, disease than a body in an atonic condition. If this is true of the whole frame, it is true of a portion of it, or of a single organ. The sewing machine overworks, that is wearies and fatigues, the learner, who exerts a muscular force, and for a too prolonged period, sufficient to drive half a dozen machines. The same instrument is but a healthy stimulant to the muscles of the lower extremities, of those accustomed to its use, developing and strengthening them. But the benefit and increased volume of the muscles actually employed is extended to the adjacent parts of the frame, and the muscles which belong to the pelvis, the back, and which support the abdominal walls, are called upon to aid in the work by steadying the frame, and firmly holding the parts to which the mus-

cles of the lower extremity are attached. The developement of these muscles affects all the adjacent organs. The circulations are carried on more regularly, the absorbents are brought to work more energetically, and there is a tonicity very perceptible throughout the abdominal parietes, which is a result of the employment of the neighboring organs. In the female we have as a direct result, a "tone" in the generative apparatus before unknown, and a direct result of normal activity. The flaccidity of the vaginal walls is supplanted by contractility; the relaxed ligaments of the uterus become tense; the perineal muscles are developed; prolapsus uteri is impossible; leucorrhœas are absent, because dependent upon debility, malposition, and displacements; the secretions are normal, because the parts are in a normal condition. Now this is not theoretical, or at least is only the theory for the explanation of absolute facts which have come under the observation of myself, or of those who were well capable to judge; and who have communicated them to me. They may, perhaps, be called "coincidences," but the pustules upon the skin are also coincidences which, with others, make up what we denominate small-pox; and the coincidences which I shall proceed to relate may be found to be as marked and persistent as the variola cicatrices.

A case has been reported to me by a member of the Academy, of aggravated uterine disease, accompanied by prolapsus and leucorrhœa, which was of many years standing, and which had resisted all treatment, including pessaries, and other local applications, which was cured entirely and solely by the result of systematic and vigorous muscular exercise, united with healthy diet, and stimulating mountain air. Such cases are not unfrequent. Passive motion in a part produces a circulation of the stagnated blood, in its enlarged, congested vessels, and in their diseased condition is, perhaps, all the stimulus that they can bear. Active exercise or motion is only compatible with a comparatively healthy condition of these organs.

We will not seek to develop this view, but be content with its simple suggestion. But while the trundle-hoop, dumb-bells, and gymnastics generally, which have no result other than increased vigor of body, are recommended as prophylactics and invigorators, either partial or general, the exercise required in working a sewing machine should not be disregarded, especially as in addition to increased health, the pecuniary returns are worthy of consideration."

Combine now with this that open air exercise which the abbreviated hours of labor gives the sempstress opportunity to enjoy—let what work is done be done in salubrious, well ventilated rooms—let her cease to wear the the outrageous contrivances for beautifying (!) the form, which so often weigh down and oppress with their abnormal temperature the organs of the back and pelvis—give her good nutritious diet which, even if poor a few hours work with the “sewing piano” will enable her to procure, and in a brief period one of the largest classes of obstinate diseases with which the physician has to cope will disappear from daily observation, and scarcely be known, save in the books, as an altogether historical matter.

And the practitioner will in the end be a gainer, for this class of cases is largely made up of those who have exhausted his time and skill and patience with exceeding small returns of *honoraria*. The *opprobria medicinæ* will be lessened in number, and consequently the respectability of the profession enhanced.

We look upon the sewing machine as a grand auxiliary to the true physician, worth infinitely more to him than a whole pharmacopœia of new drugs which will lessen the number of the heart's beats per minute in the most marvellous degree, or which will “oxygenate the blood” in a manner most mysterious in extent and wonderful to behold.

The War and Homœopathy.—There is at least one good thing towards the bottom of the Pandora's box of evils which the great war has opened. For now the sick of the half million or so of men in the army are collected in masses where they can be observed by many at once, instead of being sparsely scattered hundreds and thousands of miles apart. The effects of treatment cannot be disguised. Abstract theories are brought to observable practical tests, and visionary speculations have to assume tangible form. The ignorance which, diluted and scattered over the wide superficies of private practice, could with difficulty be detected and satis-

factorily exposed, in the compact throng of the army sick, is dragged from its obscurity and made glaringly obvious. The thin disguises of knavery and shallow pretension have been stripped off, and the chaff has been blown away from the wheat in the most satisfactory manner. In nothing is this more obvious than with regard to the attempts made by the homœopathists to foist their creatures upon the soldiery in the guise of medical attendants. Eight or ten months ago and they were rampant. They besieged the departments, protested in newspapers, assailed the President, and chose Mr. Senator Grimes, of Iowa, as a fitting conduit through which to pour out their noisome nonsense upon the Senate. They took the Commander-in-Chief captive, and kept the national army at a stand-still for four mortal weeks, whilst the Confederates threatened the Capitol, and they were titillating his palate with pellets of *Saccharum lactis* and teaspoonfuls of infinitesimal dilutions "chemically pure," with the identical teaspoon reposing on the top of the tumbler with its axis parallel to the meridian, like the wooden guns upon the Manassas fortifications, innocent and oblivious.




Here and there one of their disciples floated into the army disguised as a "regular"—and great was the jubilation of the Liliputians thereat. The newspapers puffed them, and even the God-fearing "Tribune," of this city, blew a nasal blast in token of rejoicing, much to the detriment of bystanders.

To-day, throughout the entire extent of the grand army, there is scarcely one so poor as to do them reverence. The departments at Washington are freed from their solicitations, the President from their impertinences, the Senate from their disturbing clamor, and even the Commander-in-Chief sends to Albany for Professor March to attend to his contusions, instead of telegraphing to New York for *Marcy*.

Homœopathy attempted the army and has found its Waterloo. It must henceforth conceal itself in the shades of private life—continue to dance attendance upon dyspeptic parsons, vaporous dowagers, and neuralgic spinsters. The atmosphere

of the camps is too harsh for its delicate tissues, and the poor moth must quietly prey upon the curtains and carpets of a *parvenu* aristocracy, and not tempt destruction by approach to the torch of military glory. We commend its silence, and now suggest that it get itself decently buried before the army returns to dig for it an unhonored grave.

Diseased Milk.—The New York Legislature has recently passed an act to prevent the sale of impure, unwholesome or adulterated milk. The statute is a stringent one, and its penalties of such a character that its violation will be a matter of serious personal risk to the criminal. The “swill milk” business appears about to be done away with in New York. Much credit is due to the parties who have labored assiduously to abate this filthy and deadly nuisance. We hope to see other States following the example of New York, thus putting an end to the annual “Slaughter of the Innocents,” which the nefarious traffic has brought about.

Hygienic Measures in the Army.—An eastern contemporary permits the use of its editorial columns by some anonymous writer to attack the editor of the Philadelphia Reporter, a job which the responsible conductors of the first mentioned paper have still too much self respect to indulge in. Accordingly they put forward some other  to do it. This  man is evidently a “hot-livered grammarian,” and “nothing if not critical.” He probably travels at the expense of the Sanitary Commission, and writes under the potent influence of the prophylactics they so urgently recommended. The editor of the *Reporter* is amply able to take care of himself, even though this care may require the utter demolition of his assailant. All that we have to say about the matter is, that  manifests a degree of ignorance of the so-called malarious diseases which, in a writer for a metropolitan monthly, is something more than deplorable. It is clear that he has not the slightest *practical* acquaintance with the class of diseases

referred to, but has gathered all his notions at second hand from mere theorists. He declares that the plain and obvious hygienic measures, which *only* will prevent the incursions of "malarious" disease, are "utterly unattainable by an army in the field," and hence resort must inevitably be had to continuous dosing with Quinine as a prophylactic.

In the first place the record of many regiments in the field will show that these hygienic measures are very easily attainable, and the grand reason why "regulars" are far less liable to these diseases is, because their discipline more nearly secures their attainment.

The Quinine prophylaxis is, in the large proportion of cases, a mere dodge, or temporary expedient, to escape the necessary result of official laziness and incompetency, and private recklessness and insubordination.

The young gentleman quotes, with evident admiration, the remark of some one about the quinine theorizing "coming with tidings of joy and words of comfort to those who are subject to the influence of the poison." Is he so recent a neophyte in the medical ranks, as not to know that the very existence of such a "poison" is altogether hypothetical and speculative, and that, therefore, in the present time, treatment sought to be based upon such an idea is unworthy the age, and unworthy a scientific profession?

Diseases are not entities, attacking men as Indians do their victims; neither are the causes of diseases, save in rare instances, distinct and separable.

Disease is an orderly phenomenon, the resultant of all the forces acting upon the material of which the body is composed. Disease as the result of particular poisons is a phenomenon rarely seen—the search for the particular poisons which may beget disease, it is the glory of the profession at the present time, has been measurably merged in the investigation of larger, more pervading and general laws, the infringement of which brings disorder to the physical and psychical being.

Time was when disease was attributed to demoniac posses-

sion ; then to witchcraft and enchantments ; and then to specific poisons more or less occult, and then a large share of the medical world went off in vain quest of specifics, antidotes, counter poisons.

This "quinine prophylaxis" matter is but a shadow of the darkness of old time projected over upon the present, intensified by the same mode of support as the Catholicon, Morrison's Pills, or Brandreth's. "Instances confirmatory" can be gathered plentifully as blackberries. We remember when the whole North-west went mad over the same delusion and snare. Has the course of that empire gone around the globe to get to such distinction "down East?" For we speak what we do know when we say that, it has lost it sway where it originated—on the plains and along the watercourses of the North-west.

So far as appropriate hygienic measures are "attainable" in the field, so far will the army be freed from this class of diseases. So far as they "are utterly unattainable by an army in the field"—so far will that army suffer from its ravages, and neither Morrison's nor Sappington's pills, neither Osgood's Indian Cholagogue nor Quinine will prevent.

Let the Homœopathists, the nostrum venders and quacks of other hues enter upon the wild goose chase for specifics and prophylactic drugs, but let no educated medical man prostitute his faculties to such a scarlet woman, or, rather Ixionic cloud.

Researches and Observations on Pelvic Hæmatocèle. By J. Byrne, M. D., M. R. C. S. E., Resident Fellow of the New York Academy of Medicine, &c. Monograph. From the Author. 1862.

We had prepared a notice of this excellent monograph, but the unexpected amount of matter previously in type has crowded it over to the next number. The importance and interest of the subject is such that we are unwilling to condense our notice beyond the limits embraced in the article written. At present, therefore, we can merely thank the author and strongly commend his essay.

An Address delivered before the Buffalo Medical Association, April 1st, 1862. By Dr. C. C. F. Gay, President of the Association, on retiring from the Chair. Published by vote of the Association.

We have marked several paragraphs of this very able address which we shall take the liberty to transfer to subsequent pages of the JOURNAL.

The author will please accept our thanks for a copy. We congratulate the profession of our sister city on the excellent exposition of true medical science afforded in the address of their late presiding officer.

Treatment of Diabetes.—A communication by *M. Demneaux* to the Prussian Academy of Sciences, chronicles successful treatments of saccharine diabetes by equal parts of calcined alum and rhatany.

The alum, alone or with other astringents, has long been employed in the treatment of diabetes, but we think opium, or morphine, added largely, enhance its beneficial influence.

Food in Febrile and Inflammatory Diseases.—There comes a period in every inflammatory disease, when food of nutritious character becomes indispensable to successful management of the case. And this point, we are certain, is arrived at much earlier than frequently supposed. The appetite is by no means the test—neither emaciation nor extreme prostration. As soon as there are rational and physical evidences that the height of active exudation has been passed, thoroughly digestible and nutritious food should be given, even though anorexia or other symptoms of dyspepsia be present. In fact the greater portion of treatment, from that period, must be directed to the digestive derangement. Healthy blood is the best lotion, external or internal, which can be applied to a diseased part. In simple febrile affections the “feeding point” is earlier still. The expression, “living on the fever,” is the rankest and most murderous nonsense ever uttered. Modern physiology and pathology have utterly exploded the old notions upon this subject.